

REMARKS/ARGUMENTS

In response to the rejection under 35 U.S.C. 132, Claims 2 and 9 have been amended to eliminate the language to which the Examiner objected.

Claims 1-7 were rejected under 35 U.S.C. 101 as not defining statutory subject matter. Claim 1 as currently amended calls for the method to be computer implemented and each step of the method to be carried out utilizing a computer. Given that the amendments to Claim 1 respond to the basis on which the Examiner rejected the claim under 35 U.S.C. 101, it is submitted that Claims 1-7 as presently amended define patentable subject matter.

With regard to the rejections under 35 U.S.C. 112, Claims 2, 4, 9 and 11 are now written in a form that avoids the use of the term "parameters" or "gemstone parameters" in an unclear or ambiguous manner. In particular, Claims 2 and 9 clarify that the parameter values recited are the "objective parameter values" having antecedent basis in Claims 1 and 8, respectively. Claims 4 and 11 have been amended to delete the term "gemstone parameters". It is therefore believed that all of the claims are now in proper format and are fully supported by the application as originally filed so that the rejections based on 35 U.S.C. 112 have been overcome.

The Examiner has maintained the rejection of claims 1 to 4, 6 to 8, 10, 11, 13, 14, 26 to 28 and 34 to 36 under 35 USC 102(e) as being anticipated by U.S. Patent No. 6,304,853 (Malnekoff).

As submitted in response to the first Office Action, Malnekoff describes a system and method for evaluating a gem stone, that is primarily directed to generating a price estimate, and which does not derive any subjective and/or aesthetic ratings based upon purely objective input data.

Claim 1 has been amended to clarify that the present invention provides a "method of providing a user with an assessment of subjective beauty and desirability of a gem stone".

The method of the present invention is particularly distinguished from Malnekoff in that, in a second step, a computer determines "values for a plurality of attributes of the gem stone contributing to visual appeal, each of said attribute values being derived from a combination of three or more of the received objective parameter values, the derivation being based upon predetermined consumer preferences". Support for this amendment may be found in the specification between paragraphs 35 and 48, with reference to Figures 2 to 4.

According to the abovementioned passage of the specification, in a preferred embodiment of the invention specific attributes of a diamond which contribute to visual appeal include brilliance, fire, scintillation and diameter spread. Values corresponding with these attributes are determined in the described embodiment by using lookup tables, or the like, which are indexed by at least three objective parameters relating to measured physical proportions of a diamond. For example, Figure 2 illustrates brilliance values for a range of pavilion angles and crown angles corresponding with a table percentage of 56%. As will be appreciated, this figure is simply a two-dimensional "slice" through a corresponding three-dimensional table indexed by a combination of table percentage, pavilion angle and crown angle. The lookup tables in the described embodiment are based upon a combination of virtual diamond analysis, comparisons with actual diamonds observed in various lighting environments, and upon extensive research into consumer preferences and desired characteristics, as specifically mentioned in paragraph 45. The attribute values that have been determined and stored in the lookup tables are accordingly unique to the present invention and are not disclosed or suggested in the prior art.

There is no disclosure in Malnekoff corresponding with this step of the claimed method. The system of Malnekoff uses a diamond laboratory report as a basis for determining a price estimate of a diamond. Specifically, the Malnekoff system uses cut-type, weight, colour and clarity to determine a baseline price estimate (column 4, lines 48 to 52) and uses other input parameters, namely cut proportions, fluorescence, and the identity of the laboratory generating the aforementioned data, to compute a price adjustment (column 4, lines 61 to 63). Cut proportions are identified at column 5, lines 1 to 5, as including depth percentage, table percentage, girdle thickness, crown height, crown angles, pavilion depth, pavilion angles, culet amount and finish. Fluorescence is discussed in greater detail at column 5, lines 27 to 32, and the significance of the identity of the laboratory generating the gem stone data is discussed at column 5, lines 36 to 40.

It is therefore clear that at no point does Malnekoff disclose or suggest that the system may determine, for itself, values of a plurality of attributes of a gem stone contributing to visual appeal. It is clear from the specification and claims of the present application that attributes of a gem stone contributing to visual appeal include properties such as brilliance, fire, scintillation and diameter spread. The Malnekoff system neither discloses nor suggests

any method by which these attributes may be assessed, or ascribed corresponding values, by the system described. In particular, there is absolutely no disclosure or suggestion in Malnekoff of any method or means by which values of such attributes could be derived from a combination of three or more parameters relating to measured physical proportions of a gem stone, with such derivation being based upon predetermined consumer preferences.

It is therefore submitted that Claim 1 and the claims dependent thereon are not anticipated by Malnekoff. Because independent Claims 8 and 34 include the salient features of amended Claim 1, it is further submitted that these claims and the claims dependent thereon are not anticipated by Malnekoff for the same reasons as advanced in connection with Claim 1.

Claims 21-25, 29-33 and 37 stand rejected as obvious over Malnekoff combined with Shannon '673. Shannon fails to disclose the limitations missing from Malnekoff. Furthermore, there is no motivation provided in Malnekoff to modify the methods described therein, or to combine them with the means or methods disclosed in Shannon, or any other prior art of record, in order to arrive at a method in accordance with the amended claim 1. Rather, Malnekoff teaches away from the idea of determining values of a plurality of attributes of a gem stone contributing to visual appeal based upon predetermined consumer preferences as part of an overall assessment method, by suggesting that all of the information necessary to arrive at a final price estimate is readily available in typical laboratory certificates (column 4, lines 24 to 35). Malnekoff therefore fails to recognise or suggest a key motivation for the development of the inventive method recited by amended claim 1, which is that while information provided in laboratory reports may be a good indicator of pricing according to established or conventional standards, it is not necessarily a good indicator of the subjective beauty and desirability of a gem stone according to prevailing consumer preferences. There is nothing in the disclosure of Malnekoff that would motivate the skilled reader to consider such an alternative approach to gem stone assessment, or to provide any means or method for arriving at such an assessment. Furthermore, even if Malnekoff is combined with Shannon, as suggested by the Examiner in rejecting claims 21 to 25, 29 to 33 and 37 under 35 USC 103(a), the resulting system does not include all of the features of amended claim 1, and would not work in the same way as the present invention.

As the Examiner has pointed out on page 10 of the Official Action, Shannon describes a software system that is used to create a data structure or model of a gem stone, and to simulate an illuminated gem stone to measure the exiting light. While such virtual measurements may be used to determine the quality of an existing cut, or to determine ideal dimensions for a stone to be cut, Shannon does not provide any means to ascribe values to attributes contributing to visual appeal, such as brilliance, fire, scintillation and diameter spread, on the basis of predetermined consumer preferences. Indeed, a system such as that disclosed in Shannon may be used to perform virtual diamond analysis, as described in paragraphs 39 and 40 of the present application, in order to develop charts of diamond images in the course of establishing suitable relationships, for example in the form of lookup tables, between measured physical proportions of a gem stone and corresponding values of attributes contributing to visual appeal based upon predetermined consumer preferences. However, there is no suggestion in either Malnekoff or Shannon of using virtual diamond analysis in this manner, which is a unique and novel contribution of the present invention.

It is also noteworthy that the methods and systems of the present invention provide a grading system that is able to rate gem stones on a scale from "least beautiful" to "most beautiful". Neither Malnekoff nor Shannon, singly or in combination, addresses this issue. Shannon in particular provides no feedback or grading in relation to "less desirable" stones. Malnekoff is concerned only with pricing, whereby weight (in carats) is generally more significant than other factors, ie a larger stone may be more valuable, though less beautiful, than a smaller stone. The present invention addresses this latter issue without regard to weight - something which Malnekoff and Shannon are unable to do, even when combined.

Accordingly, none of the claims as presently amended are neither anticipated by Malnekoff nor rendered obvious by a combination of Malnekoff and Shannon. It is believed

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that the application is now in condition for allowance but if further issues remain, it is requested that the Examiner telephone the undersigned to schedule a telephone interview.

Respectfully submitted,

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July 25, 2005

Date